NAME _____ DATE _____ PERIOD _____

8-2 Practice

Multiplying a Polynomial by a Monomial

Find each product.

1. $2h(-7h^2 - 4h)$
2. $6pq(3p^2 + 4q)$
3. $5jk(3jk + 2k)$
4. $-3rt(-2t^2 + 3r)$
5. $-\frac{1}{4}m(8m^2 + m - 7)$
6. $-\frac{2}{3}n^2(-9n^2 + 3n + 6)$

Simplify each expression.

7. $-2\ell(3\ell - 4) + 7\ell$
8. $5w(-7w + 3) + 2w(-2w^2 + 19w + 2)$
9. $6t(2t - 3) - 5(2t^2 + 9t - 3)$
10. $-2(3m^3 + 5m + 6) + 3m(2m^2 + 3m + 1)$
11. $-3g(7g - 2) + 3(g^2 + 2g + 1) - 3g(-5g + 3)$

Solve each equation.

12. $5(2t - 1) + 3 = 3(3t + 2)$
13. $3(3u + 2) + 5 = 2(2u - 2)$
14. $4(8n + 3) - 5 = 2(6n + 8) + 1$
15. $8(3b + 1) = 4(b + 3) - 9$
16. $t(t + 4) - 1 = t(t + 2) + 2$
17. $u(u - 5) + 8u = u(u + 2) - 4$

18. **NUMBER THEORY** Let x be an integer. What is the product of twice the integer added to three times the next consecutive integer?

19. **INVESTMENTS** Kent invested \$5000 in a retirement plan. He allocated x dollars of the money to a bond account that earns 4% interest per year and the rest to a traditional account that earns 5% interest per year.

    a. Write an expression that represents the amount of money invested in the traditional account.

    b. Write a polynomial model in simplest form for the total amount of money T Kent has invested after one year. (*Hint:* Each account has $A + IA$ dollars, where A is the original amount in the account and I is its interest rate.)

    c. If Kent put \$500 in the bond account, how much money does he have in his retirement plan after one year?

Lesson 8-2